

Phycology/practical

Lab.4: chlorophyte (green algae)

Super kingdom: Euokaryota

Kingdom: protista

Division: chlorophyta

Class: chlorophyceae

1-order: ulotricales

Genus: ***Ulothrix***

2- order: cladophorales

Genus: ***Cladophora***

3- order: zygnematales

Family: zygnemataceae

Genus: ***Zygnema*** , Genus: ***Spirogyra***

Family: desmideaceae

Genus: ***Microsterias*** Genus: ***Cosmarium***

1-order: ulotricales

Genus: ***Ulothrix***

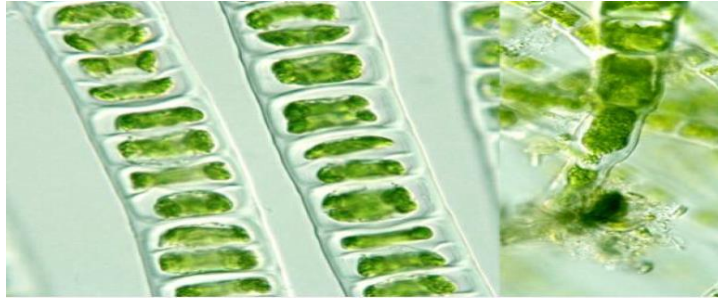
1- filamentous alga (un-branched)

2-epiphytic alga installed itself on aquatic plants or objects through hold fast

structure in the thread base

3-girdle shape chloroplast

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Figure(1): *Ulothrix*

2- order: cladophorales

Genus: *Cladophora*

1- Branched filamentous alga (true-branching)

2- Multinucleate cells having reticulate-shape chloroplast



Figure(2): *Cladophora*

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3- order: zygnematales

Family: zygnemataceae

Genus: *Zygnema* and *Spirogyra*

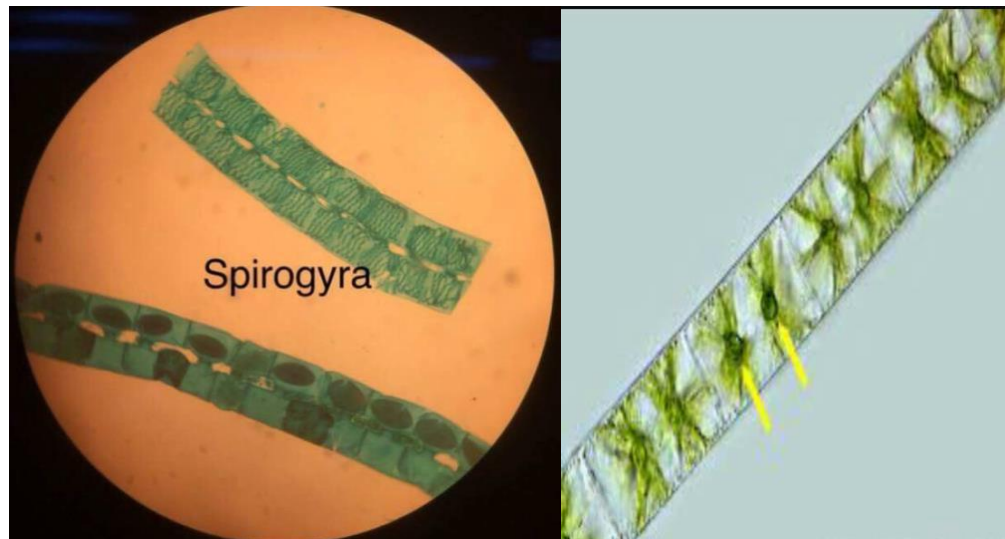
1-filamentous un-branched algae

2- characterized with spiral shape chloroplast in *Spirogyra*, and double stellate chloroplast in *Zygnema*

3- reproduce sexually by two type of conjugation:

a-scalariform conjugation: take place between two parallel adjacent algal filaments. male gametes are transferred to adjacent thread by (conjugation canal) to fertilize ovum and forming zygote.

b-lateral conjugation: take place between two adjacent cells within the same filament.



Figure(3): *Spirogyra* scalariform conjugation ,*Zygnema* whole filament

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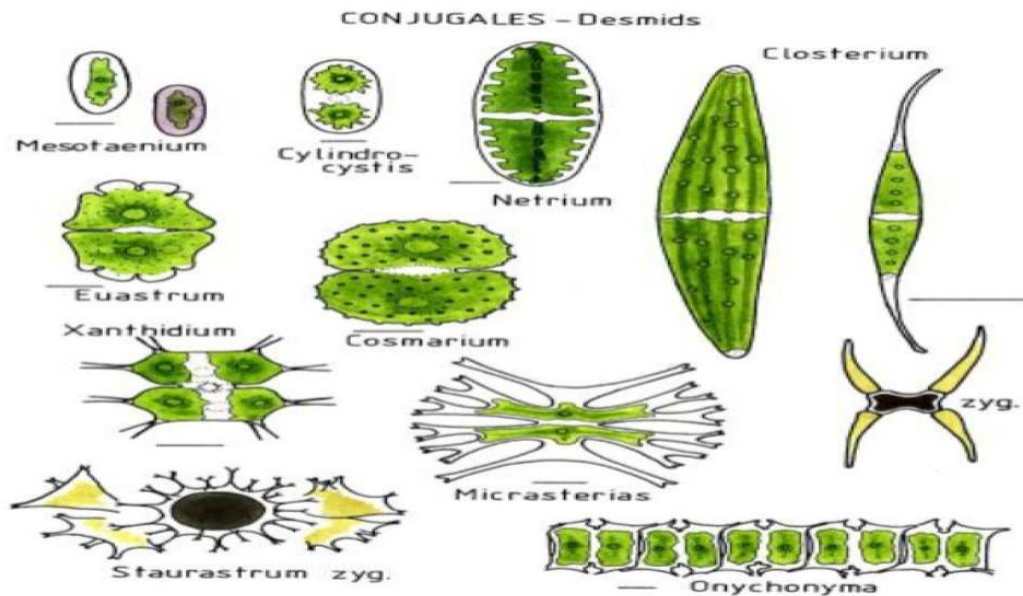
Family: desmideaceae

Genus: *Microsterias* and *Closterium*

1-unicellular desmids consisting of two semi cells joined at an isthmus. with central nucleus and chloroplast in each semi cell.

2-reproduce by simple division and sexually by conjugation.

- In *Microsterias* , semi cells are divided into lobes, each lobe is divided into secondary lobes. *Closterium* is characterized with crescent shape.



Figure(4): shapes of desmids